

You Can Dip  
this House  
in Water



TRADE  
MARK  
REG.

*Waterproofings  
Dampproofings  
Floor Treatments  
Caulking*

*By*

**TRUSCON**





100% INTEGRAL WATERPROOFING



MAIN OFFICE AND FACTORY THE TRUSCON LABORATORIES, DETROIT, MICH

## TRUSCON--an Institution Founded on the Idea of . . . . Better Concrete Construction

This well-known trade mark is registered in the U. S. Patent Office. It appears on every package containing a Truscon Laboratories' product. It stands for thirty years' experience in the manufacture of Waterproofings, and thirty years of researching in the waterproof construction field. It is your guarantee of the high Truscon standard of unvarying quality.

Truscon has always been an important name in concrete construction. Starting originally as a testing laboratory for Portland cement, steel, and other materials entering into concrete construction, The Truscon Laboratories immediately became interested in the problems of concrete work and producing better concrete.

If cement floors were soft and dusting, what could be done to make them hard and wearproof? If basements leaked, how could they be waterproofed? Continuous study and research along these lines together with our very close connections in the construction field placed Truscon Laboratories in an enviable position to devise methods and materials for improving concrete and masonry.

It is almost thirty years now since the first Truscon Integral Waterproofing was put on the market. Since that time, Truscon Waterproof Products have been used on practically every important structural job throughout the United States and Canada and in many foreign countries.

Every city has a large representative quota of Truscon Waterproofing and Floor Hardener jobs to which we refer with pride. Each year Truscon develops new and better means of getting more service, better satisfaction, beauty, wear, or utility out of construction materials.

Truscon maintains extensive research laboratories and consultation services to assist the architect, engineer, contractor, or owner to solve waterproofing, floor hardener, or special coating problems.

### Reference Chart

REQUIREMENT	TRADE NAME	APPLICATION	COLOR	PAGE
Integral Waterproofing for Concrete	Truscon Waterproofing Paste, Concentrated	Added directly to concrete mix	No Color	2
Non-Shrinking Brick Mortar	Mortite	Added directly to mortar mix. Use less water	No Color	5
Transparent Dampproofing-Brick, Stone, etc.	Super-Por-Seal	Applied by brush or spray	No Color	7
Dampproofing and Decorating Brick, Cement	StoneTex	Applied by brush or spray	White and 10 standard brick and cement colors	8
Metallic Floor Hardener	Ferricon (or Truscon) Floor Hardener	Dusted over floor previous to troweling	Buff, Russet, Tile Red, Fr. Gray, Spanish Green, Linoleum Brown	9, 10
Non-Slip Floor Hardener	Hurundum	Sprinkled over floor previous to troweling	Same as Ferricon	10
Color & Hardener-Cement Floors (Integral)	Art-Roc	Added directly to topping mix	Same as Ferricon	10
Chemical Cement Floor Hardener	Agatex	Chemical thinned with water, swept or brushed over floor	No Color	10
Sash Glazing	Truscon Glazing Mastic	Two consistencies—gun and knife	Natural, Red, Gray, Black	8
Caulking	Truscon Caulking Compound	Two consistencies—gun and knife	Natural Gray	8





Fig. 1



Fig. 2

# Waterproof Concrete Is PERMANENT CONCRETE

It isn't only to make concrete "leakproof" that integral waterproofing is used, but to make it disintegration-proof and weatherproof as well.

For this reason, we don't think of waterproofing as adapted solely to basements and sub-grade construction but for above-grade concrete as well, where the action of rain and snow, alternate wetting and drying, freezing and thawing do much greater damage to concrete than most below-grade exposures.

Fig. 1 shows a concrete sea wall built eight years ago; Fig. 2 a neighboring sea wall built about the same time. The concrete in Fig. 2 was waterproofed with Truscon Waterproofing Paste. That used in Fig. 1 was not waterproofed. Note the difference.

No concrete is so good but that it can be made better with integral waterproofing. By keeping water out of concrete, we keep out destruction and help to make concrete permanent.

Originally intended largely to waterproof against hydrostatic head (as in basements, reservoirs, or tunnels), Truscon Waterproofing Paste is today used as often for **weatherproofing** above-grade construction as for waterproofing below grade. But Truscon Waterproofing Paste does more than waterproof—it produces a smoother working, a more plastic concrete, with less water. Truscon densifies the mix, producing a stronger concrete.

Some advantages of the use of Truscon for waterproofing above or below grade concrete mixes are:

- 1. WATER REPELLENT**—Truscon Waterproofing Paste, Concentrated, lines the capillary pores of concrete with a permanently water-repellent material thus transforming the naturally water-absorptive character of concrete into definite water repellency. Water, instead of being "sucked" into the pores, is definitely held back or repelled.
- 2. PLASTICIZES AND DENSIFIES**—Lubricates the mix, producing concrete which flows readily and is easily worked around intricate reinforcing. Due to better distribution of the ingredients resulting from improved workability, Truscon Waterproofing Paste provides a dense, compact mass and minimizes segregation.
- 3. LOWERS WATER-CEMENT RATIO**—Recognized as a big influence towards increased strength in concrete.

4. **MIXES READILY WITH WATER**—Is of such chemical composition that it mixes promptly and actively with water, assuring ready distribution throughout the concrete mass.
5. **PRESERVES REINFORCING**—and prevents corrosion by holding lime in concrete.
6. **CONTAINS NO SOLUBLE MATERIALS**—deleterious to concrete or to reinforcing steel. Waterproofing cannot be leached out.
7. **INERT**—Does not react chemically with cement, hence does not lower strength of concrete.
8. **CONCENTRATED**—Contains no clay, lime, or similar material which is merely added for bulk and weight. Truscon Waterproofing Paste is all concentrated waterproofing, hence—
9. **ECONOMICAL**—Because only a minimum amount is required for each cubic yard of concrete for effective waterproofing results.
10. **TIME-TESTED**—Used by leading architects, engineers, and building contractors all over the world for a quarter of a century. (**List of nationally-known buildings, tunnels, reservoirs waterproofed with Truscon gladly furnished on request.**)





# WATERPROOFING BY MASS CONCRETE METHOD

## Specifications

Applicable to Foundations, Basements, Subways, Tunnels, Standpipes, Cisterns, Reservoirs, and Similar Structures

**Note:** The production of waterproof concrete does not alter or change the ordinary concrete operation. There is no change in the method of mixing the materials or their proportions or the placing or pouring of the concrete. The only change is the addition of Truscon Waterproofing Paste and the use of less water owing to the lubricating qualities of Truscon Waterproofing Paste. In the following specifications are eliminated many of the standard clauses customarily included in the Concrete Specifications. The clauses here given apply particularly to the waterproofing of the concrete and pertinent to the waterproofing division of the specification. They may be merged with the Concrete Specifications or, if included under a separate heading, cross reference should be made to the Concrete Specification and particularly to the standard clauses omitted here.

**Note:** Notes in italics are explanatory or advisory only and should not be included in the specifications.

**Note:** Wherever words or phrases occur in the body of the specification paragraph printed in heavy type and enclosed in parentheses, choose that word or phrase which applies. Where the word "specify" occurs thus (**specify**), add the particular word or clause applicable.

**Note:** Select and include only those clauses which apply to the particular work supplemented by special conditions not here included.

### (1) WORK INCLUDED

The work included under this heading is the waterproofing by the Integral Mass Concrete Method of the following areas:

**Note:** Here list and locate definitely the areas which shall be made watertight. If complete detailed drawings are furnished, reference should be made to them. Lacking such details, it is advisable and customary to list and locate the footings, walls, floors, etc. which are to be waterproofed.

**Note:** See suggestions under heading "Waterproofing Data and Details."

### (2) STRUCTURAL PROVISIONS

(2a) Walls (and) floors (and roofs) to be waterproofed shall be constructed (in accordance with the detail drawings) of sufficient strength to withstand the hydrostatic head and shall be properly reinforced to withstand temperature or any other stress to which they may be subjected.

(2b) Floor slabs shall be keyed into the walls or other vertical surfaces.

(2c) Expansion or important construction joints shall be so designed and constructed that they shall be water tight.

**Note:** Amplify to include any special provisions included under this contract.

### (3) RELIEVING WATER PRESSURE

(3a) Water shall be kept out of the pit while concrete is being poured and until thoroughly hard.

(3b) The method of effectively eliminating water during the concreting operation shall be optional with the contractor, but when determined upon shall be submitted to the (architect) (**specify**) for final approval.

**Note:** Where definite methods of water elimination are determined upon involving drain tile, under-floor beds of gravel or cinder fill, temporary sumps, bleed pipes, etc., these should be here specified in detail.

### (4) MATERIALS

(4a) **Integral Waterproofing**—Integral waterproofing shall be Truscon Waterproofing Paste Concentrated, as manufactured by The Truscon Laboratories, Detroit, Michigan.

Drums of Truscon Waterproofing Paste shall be kept air tight until ready to use and protected from freezing.

(4b) **Cement**—The cement shall be a high grade Portland, which has been carefully tested and found to satisfactorily pass the requirements of the Standard Specifications of The American Society for Testing Materials, and preferably ground so that eighty per cent (80%) shall pass a standard two hundred (200) mesh sieve.



60 WALL TOWER BLDG.,  
New York City

Clinton and Russell,  
Holton and George, Architects  
James Stewart & Co., Contractors

Truscon Waterproofing Paste used in all  
below-grade construction as well as in all  
brick mortar

FIRST NATIONAL BANK  
BLDG., St. Paul, Minn.

Graham, Anderson,  
Probst and White,  
Chicago, Architects

Paul Steenberg Construc-  
tion Co., St. Paul,  
General Contractor

All below-grade water-  
proofed with Truscon



100% WATERPROOFING







WATERPROOFING • CORRIDOR • ROOF • WALL • FLOOR



TRUSCON



MONTGOMERY WARD & CO., Kansas City, Mo.  
McKechin and Trask, Kansas City, Architects  
Foundations integrally waterproofed with Truscon  
Truscon Metal Sash Putty used on all steel sash



SEARS-ROEBUCK & CO., Philadelphia, Pa.  
Nimmons and Nimmons, Chicago, Architects  
Irwin and Leighton, Philadelphia, Contractors  
Sub-grade construction integrally waterproofed

(4c) **Sand**—The sand shall consist of spherical grains of any hard rock that is practically free from clay, absolutely free from organic matter, and uniformly graded in size from coarse to fine.

(4d) **Stone**—The stone shall be washed gravel or hard crushed trap rock and shall for forty per cent (40%) of its bulk be uniformly graded between the diameters of one (1) and one and one-half (1½) inches, and for sixty per cent (60%) of its bulk be uniformly graded between diameters of one-quarter (¼) and one (1) inch.

(4e) **Water**—Water shall be clean and free from alkali or other impurities.

## (5) MIXING

(5a) **Concrete**—Concrete shall be composed of cement, sand, and stone in proportions not leaner than a 1:2:4 by volume. To this mixture shall be added Truscon Waterproofing Paste in the proportions of one (1) full Truscon Measure to each bag of cement.

**Note:** A Truscon Measuring Cup is furnished with each drum of Truscon Waterproofing Paste, attached under the lid of the container.

The cement and aggregate shall be first mixed dry to a uniform color—then only sufficient water shall be added to provide a plastic mix.

**Note:** Less water is required in concrete containing Truscon Waterproofing Paste than ordinary concrete. By plastic is meant a concrete which can be readily molded, but which when the mold is removed flows sluggishly—without segregation of the water or the fine materials from the coarse.

Machine mixed concrete shall be mixed at least two (2) minutes after all materials have been dumped from the skip.

**Note:** Normal operation of mixer is from 15 to 25 revolutions per minute.

(5b) **Cement Mortar Floor Topping**—Cement mortar floor topping shall be mixed in the proportions (by volume) of one (1) part of cement to two (2) parts of sharp sand. To the dry cement and sand shall be added Truscon Waterproofing Paste in the proportions of one and one-half (1½) full Truscon Measures to each bag of cement.

Topping shall be mixed as above specified for concrete.

(5c) **Slush Coat**—Slush coat shall consist of one part cement and one part sand, to which 20 pounds of Iso-Vol bonding per bag of cement is added and mixed to a thick, buttery consistency with water.

## (6) PLACING

(6a) **Concrete Footings, Walls, Etc.**—All waterproofed concrete shall be placed (so far as is possible) in one continuous operation, each pouring sufficiently spaded and worked to insure uniform density.

Where joints are absolutely unavoidable, exercise special care before leaving the concrete just poured to remove all laitance and roughen the surface preparatory to the continuance of the concreting operation. Before placing the new concrete against the old surface, thoroughly wet the concrete and apply a slush coat (thoroughly broomed) immediately before placing additional concrete.

(6b) **Reinforcement**—All reinforcement shall be accurately placed in exact accordance with the details. Concrete shall be so placed as not to disturb reinforcement and in such a manner (spaded or rodded) as to completely surround it with concrete of uniform density.

(6c) **Floors**—Before placing floors, thoroughly clean the concrete of footings, walls, etc., at the floor slab junctures. Immediately before the placing of the floor base, thoroughly wet and slush coat the concrete surfaces as specified above for "joints."

The ground to receive floors shall be accurately leveled (pitched if required) and settled to assure uniform thickness of the floor slab.

The waterproofed concrete base shall be poured and screeded to the full thickness, levels and pitches detailed in one continuous operation. Placing of concrete shall be accomplished as above specified. As soon as the base has set but before it has dried, apply the waterproofed cement mortar floor topping to a minimum thickness of (specify) troweled to a smooth hard surface.

## Condensed Data

### Ingredients

1 part	(by volume)	Portland Cement
2 parts	(by volume)	Clean Sand
4 parts	(by volume)	Stone

### Waterproofing

- 1st. Use the Truscon Measure supplied with each drum of Truscon Waterproofing.
- 2nd. Add one (1) Truscon Measure per sack of Cement to the dry cement and aggregate. Then temper with clear water as usual.

### Quantity Required

Estimate 7 pounds of Truscon Waterproofing Paste to every cubic yard of concrete poured.



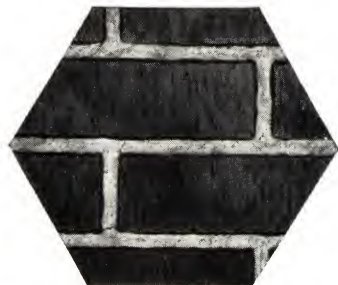


Fig. 1. Shrinkage in Ordinary Brick Mortar

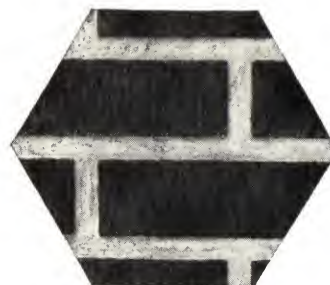


Fig. 2. With Mortite—No Shrinkage

## TRUSCON MORTITE

### SHRINKPROOF—WATERPROOF MORTAR

#### "Dry Mixes Made Workable"

It has long been known that the excess water required for proper workability in cement and lime mortars is productive of a great deal of harm. Such excess water must escape somehow, which it does by evaporation. As it evaporates, it causes a loss in mortar volume, which loss in volume results in contraction or shrinkage of the mortar.



Fig. 3. Close-up view of brick wall showing shrinkage cracks in mortar joints not ordinarily noticed except on close inspection

Experiments with various types of mortars have proved conclusively that shrinkage is in direct ratio to the quantity of excess water. The greater the amount of excess water, the more active the shrinkage. Conversely, the drier the mix, the less the shrinkage.

The ideal cement or lime mortar then would be one in which no excess water was used. That would give a "dry mix"—too stiff and harsh to be workable—such a dry mix does not have the proper wetting or spreading qualities required of a mortar.

For years, the research and technical departments of the Truscon Laboratories

have addressed themselves to the problem of obtaining better wetting and better workability with a dry mix—knowing that the dry mix eliminates shrinkage. As an example of how successful this work has been, we refer to the photographs at the top of page 6.

Fig. 5 is a 1:3 cement and sand mortar mixed with insufficient water for workability. It is obviously too dry a mix for use. However, by the addition of a small quantity of Truscon Mortite, the very same mix becomes a mortar of ideal, creamy consistency (Fig. 6).

Nevertheless, it is the same dry mortar shown in Fig. 5. No water added—therefore, no more water to evaporate—therefore no shrinkage, as the mortar occupies substantially the same space after it has dried as it did when wet.

Mortite, a product of the research laboratories of Truscon, is a most valuable contribution to the building industry because it finally reconciles the age-old problem of dry mixtures with maximum



Fig. 4—Bricks removed from wall shown in Fig. 3. View shows back, unexposed ends and sides of brick. Note water and dirt stains where same have entered through shrinkage cracks in mortar. Backs of these bricks were wet when taken out of wall





Fig. 5. A stiff, harsh mortar—non-shrinking—too dry to use



Fig. 6. Same dry mix, with MORTITE—still non-shrinking, but workable

workability. The result is a non-shrinking lime or cement mortar.

Work of independent testing laboratories investigating Mortite has proved the practicability of a dry mix with this material, through slump tests showing from 90% to 130% greater slump with Mortite than without the Mortite.

Experiments have also shown that Mortite has a very beneficial influence on cement and lime mortars by "locking" the lime, or rendering it insoluble. Mortite contains ingredients capable of combining with calcium hydroxide to form water-insoluble compounds. Tests by independent laboratories have shown that where as little as 5% of Mortite was added to a lime water solution, it has resulted in the fixation of as high as 56% of the soluble lime.

Such lime is immediately converted into stable and insoluble elements. It helps increase the strength of the mortar and renders it less sensitive to the corrosive action of sulphur and other chemical compounds which exist in the smoke and gases of industrial centers.

Because such lime cannot be washed out of the mortar by moisture, the formation of lime stains or white deposits on the surface of the brick, often referred to as "efflorescence", is greatly minimized or entirely eliminated.



Fig. 5—Increased slump—indication of less water needed in mortar to obtain same workability. Mortite ranges from 90% to 130% greater slump for various mixes—permits use up to 25% less water

Mortite confers all these benefits on lime and cement mortar without in any way impairing its strength. In fact, tests show that bond strength and compressive strength are increased—compressive strength sometimes as high as 17%.

For stronger bond, waterproof mortar joints, and elimination of shrinkage and efflorescence, specify Truscon Mortite on your next masonry job.

### WHY MORTITE SHOULD BE USED IN ALL LIME AND CEMENT MORTAR

1. Mortite enables the mason contractor to use a dry mix—with perfect workability.
2. It eliminates shrinkage, crazing, and hair checks in mortar joints because it reduces the amount of water necessary for a workable mix.
3. Such mortar, though drier, is easier spreading because it wets easier.
4. Increases mortar strength.
5. Waterproofs by introducing water-repellency.
6. Renders the lime insoluble.
7. Greatly reduces or eliminates efflorescence.
8. Resists corrosion from smoke and gases.
9. Because of better wetting, provides closer contact with the brick—fewer voids and stronger bond.

### Specifications

Stir contents of can thoroughly with a wide paddle. Keep stirred occasionally while using.

To the mortar add 1 quart Truscon Mortite per sack of cement and 1 quart for each cubic yard of lime. (On the basis of 1:1:6 mix—1 part Portland cement—1 part lime—6 parts sand—use 2 quarts of Mortite.)

#### Estimated Quantity Required:

- 1/4 to 3/8 in. mortar joints—1/2 gal. Mortite per 1000 brick.
- 1/2 to 5/8 in. mortar joints—1 gal. Mortite per 1000 brick.



WATERPROOF—20% • 100% IMPROVING



TRUSCON





WATERPROOFING - SCREENED ROOF - FLOORING - TRUSCON



# TRUSCON SUPER-POR-SEAL

## Stainless Dampproofing for Masonry and Concrete

A very significant discovery has been made in the last few years relating to the part that moisture plays in soiling buildings. Buildings of identical light-colored stone, constructed at about the same time in the same neighborhood, have shown marked differences in their appearance when the outside surface of these buildings was treated with Super-Por-Seal transparent dampproofing. The dampproofed building remains not only free from decided rain streaks but also maintains a much lighter and cleaner appearance after years of exposure. This fact has been so outstanding that lately many fine structures of marble, Bedford stone, or other limestone are being treated with an external application of Super-Por-Seal to prevent moisture from carrying soot and dirt into the pores and spoiling the appearance of the stone.

Super-Por-Seal is practically non-staining and non-yellowing on even the lightest limestone or marble. It is non-yellowing because it is not a wax type dampproofing. Super-Por-Seal is an entirely different material from the standard transparent dampproofings in that it repels moisture without changing the color or appearance of the surface. Because it is not a wax type of material, Super-Por-Seal may be painted over if later it should be decided to change the decorative scheme or appearance of the building.

In many cases, where old buildings which were badly weathered have been cleaned by sandblasting or other method, it is now customary to apply Super-Por-Seal to keep them clean.

Super-Por-Seal may be used on stucco, concrete, brick, or stone. Applied by brush or spray. Recommended for coating the embedded, unexposed sides of fine cut stone to prevent moisture stains. Also recommended for sizing mortar joints previous to caulking to prevent caulking stains.

## Specifications

(1) **Condition of Surface**—Apply Super-Por-Seal only over a clean, dry surface in good condition. Cracks must be repaired either with mortar or caulking compound. Masonry around window and door frames must be tight—caulk if necessary. Repoint brick or stone work where necessary. Cut out and restucco crumbling stucco.

(2) **Application Over Concrete, Stone, Stucco**—Apply Super-Por-Seal in two liberal coats, each flowed on with a large wall brush that will carry a large quantity of liquid. Care should be taken that no sections are missed in the application—some forms of stucco are extremely absorbent, and enough material should be applied to thoroughly saturate the surface.

After the first coat of Super-Por-Seal has dried for at least 12 hours, apply the second coat.

If spray is used, give one thorough spray application.

(3) **Application over Brick**—When Super-Por-Seal is applied to a brick surface (usually less porous than others), care must be taken not to use too much; otherwise it is apt to show a white deposition on the surface indicating that more Damp-proofing has been used than the brick can absorb. For this reason, it is often preferable to use but one coat of Super-Por-Seal over brick, being sure that the one coat is evenly applied. Sand lime and similar porous bricks shall be double coated exactly as specified for concrete.

(4) **Application over Bedford Stone, Marble**—Apply one coat of Super-Por-Seal as specified for concrete.

**Note:** Quantity required about 1 gal. per 80 sq. ft., 2 coats, or 1 gal. per 150 sq. ft., 1 coat.



FORD ROTUNDA, Dearborn, Mich.

Albert Kahn, Inc., Architects

Exterior limestone protected from dirt and weather staining with Super-Por-Seal



# TRUSCON STONETEX

The Original (Tung Oil)  
Concrete and Brick Coating



CRANE COMPANY, Chicago

Over six blocks of buildings beautified and dampproofed with StoneTex

For nearly twenty-five years now StoneTex has been made in only one way—namely, with specially heat-treated or polymerized China Wood Oil (Tung Oil). This valuable oil when properly processed produces the most weather-resistant and lime resistant concrete and brick coating known.

It is the lime reaction in a concrete wall and in the mortar joints of masonry which is responsible for the short life of ordinary oil paints. With StoneTex, however, eight and ten years' service without repainting is not at all unusual, as its Tung Oil vehicle withstands moisture and lime.

Another advantage of StoneTex is its finish, which is not a high gloss, but that of a soft, dull-toned texture, so much more appropriate for concrete or masonry.

**Application**—By brush or spray.

**Colors**—Light Ivory, No. 15—Light Cream, No. 16—Light Buff, No. 17—Caen Stone, No. 57—Bedford Gray, No. 18—Portland Gray, No. 19—Concrete Gray, No. 20—Dark Brick Red, No. 10—Moss Green, No. 12—Brown Stone, No. 9—White, No. 1—Pure White, No. 11—Black, No. 13.

## Specifications

(1) **Condition of Surface**—All surfaces to be covered with StoneTex must be absolutely dry.

(1a) Fill all cracks around window sills, etc., with Truscon Masonry Caulking Compound and allow to dry over night.

(1b) On stucco surfaces remove and re-stucco disintegrated sections. Cut out, thoroughly wet, and patch cracks with cement mortar (1 to 3). Keep moist for several days. Allow ample time to thoroughly dry (3 weeks or longer).

(1c) Remove dirt and loose particles with a stiff broom.

(1d) On painted surfaces showing blisters, peeling, cracking, powdering, etc.—scrape or burn off old paint. On surfaces in good condition, scrape or wire brush clean.

(2) **Application**—Mix StoneTex thoroughly before applying. Apply by brush or spray.

(2a) Prime all new or unpainted surfaces with one coat of StoneTex thinned with StoneTex Liquid in the proportion of 1 gal. of Liquid to 5 gals. of StoneTex. Apply in an even, uniform coat brushed well into pores. Stipple thoroughly over rough plaster surfaces. Allow priming to dry at least 48 hours (preferably 72 hours). Apply a second coat of StoneTex as it comes from the can (unthinned).

(2b) When applied over previous StoneTex, apply one coat as it comes from the can (unthinned).

(2c) When applied over previous lead and oil paint, thin StoneTex with pure boiled linseed oil in the proportions of 1/2 pint of oil to the gallon of StoneTex.

**Note:** Quantity required over new surfaces, 1 gal. per 100 sq. ft., 2 coats. Painted Masonry, 1 gal. per 250 sq. ft., 1 coat.

# TRUSCON CAULKING COMPOUND

(Conforms to U. S. Bureau of  
Standards Specifications)

Truscon Caulking Compound is non-staining, permanently elastic, and waterproof. Bonds securely to stone or metal, forming a tough skin on the surface but remaining indefinitely soft, flexible, and elastic underneath.

Caulking does not crack, check, or break away from the sides of the opening. It is compounded of oils, gums, and pigments so b'ended and balanced as not to stain even delicate stone, such as limestone or marble. Withstands all the standard tests of heat and cold—does not slump in warm weather—does not become brittle in cold. A material that saves many times its original cost by waterproofing and air-tighting around window and door frames, and other openings.

**Note:** Government specifications require the use of a sealer, such as Super-Par-Seal, for priming mortar joints before caulking.

Furnished in two types—for knifing and for gun application.

**Color**—Natural, which blends with most stones. Special colors made to order.

**Note:** Quantity required, 1 gallon for from 75 to 80 lineal feet of 1/2 x 1/2 in. joint.



THE NEW FIELD BUILDING, Chicago

Graham, Anderson, Probst and White, Architects

Waterproofed with Truscon Caulking Compound. Other products likewise used: Bar-Ox Steel Coating—Asepticote Washable Wall Coating

# TRUSCON GLAZING MASTIC

A Modern Window Glazing Compound

Truscon Glazing Mastic was provided to fill the modern demand for a glazing compound that would definitely waterproof and windproof wood or steel sash. The secret of this material is the fact that it skin-dries, remaining soft underneath, which gives it that elasticity so desirable where large areas of steel sash have to be glazed. Another advantage is that where glass is accidentally broken and has to be replaced, the Glazing Compound does not have to be cut out with hammer and chisel. It is readily removed with a putty knife. Thoroughly waterproof—far more enduring and weatherproof than ordinary putty, Truscon Glazing Mastic makes an air-tight, water-tight, and permanent seal. No shrinkage—may be painted over. Applied by knife or gun. Colors—Natural, Dark Gray, and Red.



WATERPROOF—NO LONGER A PROBLEM



TRUSCON



# TRUSCON CONCRETE FLOOR TREATMENTS

## TRUSCON FERRICON TRUSCON FLOOR HARDENER (Metallic)

**Uses**—"Truscon Floor Hardener" is a metallic floor hardener. "Truscon Ferricon" is an improved metallic floor hardener containing Zilicon.

**Description**—"Truscon Floor Hardener" is characterized by its cleanness—freedom from oil, graphite and other injurious impurities, such as metals reactive with alkali (aluminum). It is graded from coarse down to fine. The coarse particles take the wear—the fine particles fill in the spaces between the coarse particles, exactly as in the grading of good concrete.

To the above qualifications of a first-grade, pure Metallic Floor Hardener, Truscon introduces a new feature known as Zilicon. Zilicon is used in "Ferricon" (Metallic Floor Hardener) because it contributes additional advantages: Increased plasticity, improved workability, densification of mix, increased strength, absorption of the lime, thereby protecting the floor against certain acids and minimizing lime streaks. The metallic parts do not sink into the surface but tend to stay near the top.

**Colors**—Natural Gray, Tile Red, Spanish Green, French Gray, Buff, Russet, Linoleum Brown. Special colors formulated on request.

### Specification No. 1

**Note:** Use for both Truscon Floor Hardener and Truscon Ferricon when wearing surface is laid on a set slab.

**(1A) Preparation of Set Slab Before Application of Topping**—Where a topping is applied to a set slab, the hardened concrete surface shall be mechanically roughened by chipping and thoroughly cleaned with a heavy wire broom to remove all dust and dirt. Then soaked with water. Concrete base must be thoroughly wet to avoid any possible tendency of the hardened surface to absorb water from the bonding grout and impair its adhesive value.

To the clean, water-saturated surface, apply a slush bonding coat prepared by mixing Portland cement with water to a heavy, creamy consistency that will permit easy brush application, adding 20 pounds Iso-Vol per bag of cement. This Iso-Vol bonding coat shall be applied continuously over entire surface, rubbing it into the surface with a stiff fibre broom.

**Immediately** after applying the slush bonding coat, follow with the finish as described in paragraph (1C).

**(1B) Hardener**—Truscon (Floor Hardener) (Ferricon) as manufactured by The Truscon Laboratories, Detroit, Michigan.

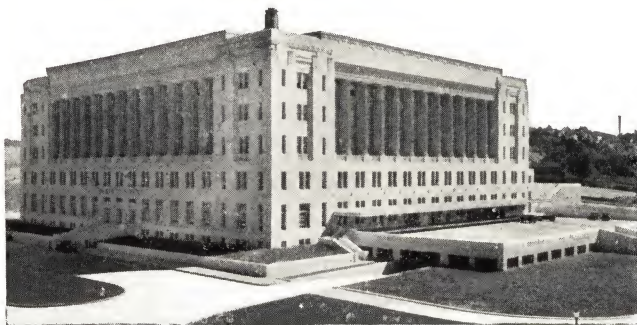
**(1C) Application of Topping**—The topping shall be applied and properly bonded to the set slab to a thickness of not less than 1 in. (to 1½ in.) and shall consist of—

#### For Light Traffic Floors—

- 1 part Portland cement (by volume)
- 2 parts coarse, clean sand (by volume)

#### For Heavy Traffic Floors—

- 1 part Portland cement (by volume)
- 1 part coarse, clean sand (by volume)
- 2 parts (by volume) of clean, washed pea gravel graded from ¼ to ⅜ inch.



U. S. POST OFFICE, Kansas City, Mo.  
Supervising Architects Office, Washington, D. C.  
Truscon Metallic Floor Hardener used on all concrete floors, loading docks, etc.  
Metal sash glazed with Truscon Metal Sash Putty

Sand shall be selected to provide grading from coarse to fine to insure maximum density. Proportions shall be accurately measured by volume and not approximated. Water shall be carefully controlled so that not more than 4½ to 5 gallons of water (including the moisture in the aggregate) shall be used per sack of Portland cement.

If hand mixed, the aggregate shall be turned over dry three times; if machine mixed, for not less than two minutes, special care being taken to avoid a sloppy consistency.

The topping shall be screeded to a true and even surface and then well floated with wood floats to close all voids and holes.

**(1D) Application of Metallic Hardener**—After the floating of the topping and preceding the troweling, a dry mixture of thirty (30) pounds of Truscon (Floor Hardener) (Ferricon) and twenty-two (22) pounds of Portland cement mixed thoroughly to an even, uniform color shall be sprinkled over each one hundred (100) square feet of surface.

Care shall be taken not to apply the dry mixture of cement and hardener when there is any excess or surplus of water on the floated surface.

The dry mixture of cement and hardener shall be well floated to insure perfect combination and assimilation with the concrete and then troweled to an even, smooth surface.

The surface shall receive a second troweling when the finish has set sufficiently to finish smoothly.

**Note:** In the case of a floor subjected to heavy service, such as in forge shops, railroad shops, loading platforms, use 40 lbs. of Truscon Floor Hardener or Truscon Ferricon and 30 lbs. of Portland cement to the 100 sq. ft. (For Super-Service Concrete Floors, see Specification No. 3).

It is recommended that expansion joints be used at regular intervals in the topping. Joints shall be cut through the full thickness of the topping with narrow tool, and edges shall be hard finished.

**(1E) Protecting the Floor**—After the cement finish has hardened (about 48 hours), it shall be covered with a non-staining waterproof paper such as Sisalkraft and kept thoroughly wet for at least seven days and for a longer period if practical conditions will permit. Finish shall not be subjected to light traffic until it has set for about ten days, nor subjected to heavy traffic under three weeks of favorable weather conditions.

### Specification No. 2

**Note:** Use for Truscon Floor Hardener and Ferricon when hardening and densifying Monolithic Concrete Floors.

**(2A) Hardener**—**Note:** Same as specified in (1B) above.

**(2B) Preparation of Floor to Receive Hardener**—Concrete base or slab shall consist of concrete of such compressive strength as specified by the architect.

Materials shall be mixed not less than two minutes—placed, tamped, and screeded to a level surface. Do not leave holes. (Should low spots appear, these may be leveled by dusting on a dry mixture of 2 parts sand and 1 part cement—and again carefully screeded or floated.)

**(2C) First Application of Hardener**—Immediately following leveling off the slab, deposit uniformly upon the surface a dry mixture of

- 1 Bag Truscon (Floor Hardener) (Ferricon)
- 2 Bags Portland cement
- 3 Bags clean, coarse sand.

Sprinkle uniformly over 1,000 sq. ft. Float with heavy, wooden float.

**(2D)** Immediately following floating of the above Hardener finish, make another mixture of

- 2 Bags Truscon (Floor Hardener) (Ferricon)
- 1½ Bags Portland cement

and sprinkle uniformly over the same 1,000 sq. ft.

Under no circumstances shall this dry mixture be applied when there is any surplus water on floated surface.

This second application of Hardener shall be floated in with wooden floats and steel troweled to a smooth surface as soon as



concrete has hardened sufficiently to prevent excess of fine material from working to the top. Surface shall receive a second troweling when the cement has set sufficiently to finish smoothly.

**Note:** In the case of a floor subjected to heavy service, such as in forge shops, railroad shops, loading platforms, etc., use the following proportions of cement and sand for the second application, leaving the first application as in (2C). For Super-Service Concrete Floors, see Specification No. 3).

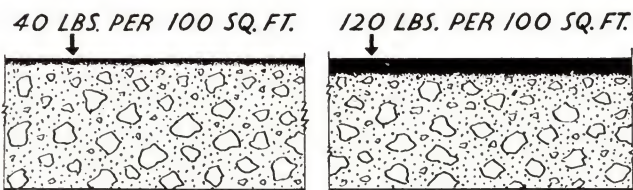
#### Second Application—

- 4 Bags Truscon (Floor Hardener) (Ferricon)
- 3 Bags Portland cement

(2E) **Protecting the Floor**—Note: Same as specified in (1E).

### Specification No. 3 Super-Service Concrete Floors

In the case of floors subjected to extremely heavy traffic, a much greater poundage of Ferricon Floor Hardener can be worked into the topping by a special mechanical device than would ordinarily be possible. Through the use of this device, as much as from 90 to 120 pounds Ferricon can be worked into the cement surface per 100 square feet, providing a finish so dense, hard, and tough as to be practically waterproof. Sketch below shows in cross section the relative difference in the amount of Ferricon in the ordinary cement floor and the super-service Ferricon floor. For detailed specifications, address Home Office at Detroit or nearest branch.



### TRUSCON HURUNDUM

**Use**—Non-slip Floor Hardener.

**Description**—Hurundum aggregate is similar in principle to Ferricon. However, it contains no iron but instead an aggregate like carborundum in its hardness. Hurundum aggregate has a porous surface texture enabling the cement paste to key to it, forming an exceedingly hard, wear resistive, non-slip surface.

**Non-Rusting**—Hurundum is especially recommended in public places such as corridors and steps; around oil stations; in and about airplane hangars. Its non-rusting and non-slip qualities make it very desirable.

**Colors**—Natural Gray, Tile Red, Spanish Green, Buff, Linoleum Brown, French Gray, and Russet. Special colors formulated on request.

#### Specifications

(1) **Non-Slip Hardener**—Truscon Hurundum as manufactured by The Truscon Laboratories, Detroit, Michigan.

(2) **Application with Topping**—After topping has been screeded and floated, dust on 30 lbs. of Hurundum as it comes from the package, for every 100 sq. ft. of surface. Again float and steel trowel. When set sufficiently, give surface a final troweling. Never apply Hurundum when there is any surplus water on surface, and do not float or trowel cement surface when it is too wet. Best results are obtained by working the surface only after the water has gone down. Working the topping when the surface is too wet tends to suck the fines and laitance to the surface, dulling the color, burying the Hurundum aggregate and leaving a soft layer of fines on the surface.

(2a) If a greater degree of hardness is desired, an additional 10 lbs. or 15 lbs. of Hurundum per 100 sq. ft. can be sprinkled on after the first 30 lbs. has been floated in.

(3) **Application with Monolithic Floors**—After the 1:2:4 concrete slab has been poured and properly screeded, dust on surface a mixture of 1 part cement to 2 parts sand. Use about 50 lbs. of this mixture to each 100 sq. ft. Float this into the surface but do not steel trowel.

When the concrete has stiffened sufficiently to hold up knee boards, dust on the surface Truscon Hurundum as follows:

**Note:** Specify application as above in par. (2) and (2a).

### TRUSCON ART-ROC

**Use**—Coloring, hardening, waterproofing concrete and Portland cement mortar.

**Description**—Truscon Art-Roc contains no calcium chloride. It is a waterproof product—an essential feature of any floor coloring material assuring permanency, uniformity, and brilliancy of color.

Art-Roc is distinctive in color brilliance; color uniformity; stainproofness; ease of handling (workability); waterproofness; low water-cement ratio, resulting in (a) greater strength, (b) increased hardness, (c) increased wear resistance and resistance to disintegration from chemicals.

It is a semi-liquid added directly to the concrete mix.

The advantage of Art-Roc is that the color is integrally carried throughout the topping to a depth of  $\frac{3}{8}$  in. or even  $\frac{3}{4}$  in. Because the color is in liquid form it mixes readily with the cement, aggregate and water and gives uniform distribution. By controlling the water-cement ratio, "sloppiness" and segregation of the coarse particles or laitance is avoided.

Art-Roc adsorbs the lime, preventing lime streaks and resulting in sharper and more brilliant colors. It is not only adapted to floors and sidewalks but may be used on the vertical surfaces of cement plasters or stuccos.

Unlike mortar colors, Art-Roc increases the strength of concrete. An Art-Roc surface is harder than ordinary concrete and is free from dusting.

**Colors**—Tile Red, Linoleum Brown, French Gray, Buff, Russet, Spanish Green, Natural or Colorless. Special colors formulated on request. The Colorless makes concrete floors waterproof, durable and chemical-resistant.

#### Specifications

**Note:** Use for Art-Roc Topping applied to a set slab.

(1) **Preparation**—Note: Same as paragraph (1A) Preparation of Set Slab before Application of Topping, page 9.

(2) **Topping**—Immediately after the slush coat, apply the Art-Roc cement topping to a thickness of not less than 1 inch (to  $1\frac{1}{2}$  inch). For specifications, see paragraph (1C) Application of Topping, page 9.

(3) **Mixing Art-Roc with Topping Finish**—Stir contents of Art-Roc can thoroughly. Add directly to topping mix in proportion of 1 gal. of Art-Roc per sack of cement. (For Art-Roc Colorless, use  $\frac{1}{4}$  gal. per sack of cement.)

Temper with sufficient mixing water to obtain desired workability. Use not over a total of  $4\frac{1}{2}$  to 5 gals. of water per sack of cement (including the water in the aggregate).

(4) **Laying Art-Roc Finish**—Apply Art-Roc finish and float and trowel in usual manner. Hard trowel surface again when it begins to set to a smooth, glossy tile-like hardness.

(5) **Protecting the Floor**—Note: Same as specified in (1E), page 9.

(6) **Wax Finish**—After floor is thoroughly dry, apply a coat of Art-Roc Wax, Clear, and polish, using a weighted brush.

### TRUSCON AGATEX

**Use**—Chemical Hardening.

**Description**—Agatex is a chemical mixed with water, flushed over a concrete floor and worked into the pores by sweeping. It combines with the free lime and other elements in the cement, forming new compounds which add considerable density and hardness to the surface. Because of the ease and convenience of application and the economy of this material, Agatex is widely used as a maintenance product—in factories, garages, public buildings, even in residences—to stop sanding and dusting of cement and to keep floors in condition. May be used on new floors after they are cured and dried.

Agatex, made in two forms—crystals and liquid, is colorless and does not change appearance of concrete.

When used in canning establishments, it prevents disintegration of concrete from fruity or other vegetable acids.

#### Quantity Required:

Agatex (Liquid)—About 1 gallon to each 100 to 125 sq. ft., 3 coats.

Agatex (Crystals)—About 1 pound to each 40 sq. ft., 2 coats.

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# TRUSCON

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Non-slip floor hardener. Natural and six attractive colors.

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Integral hardener and coloring. Six attractive colors.

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Chemical hardener for cement.

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